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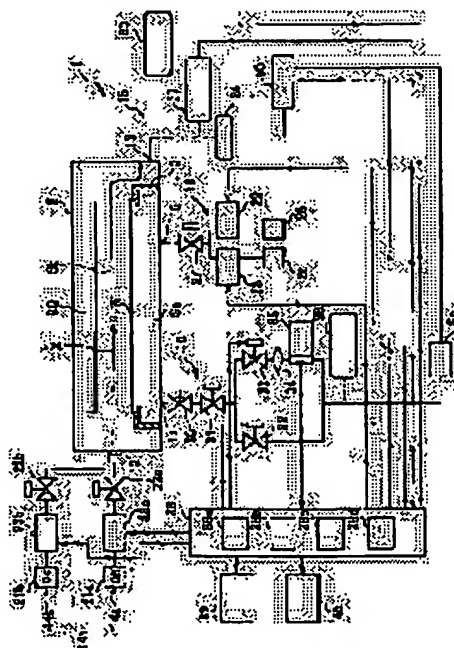
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(54) FILM FORMATION METHOD, APPARATUS, AND SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a film forming method and apparatus, which can form a thin film on a substrate to be processed with a reproducibility and uniformity for a sufficient film thickness and a sufficiently large film formation rate and with a simplified apparatus arrangement.

SOLUTION: A thermal treatment apparatus 1, which forms an SiO₂ thin film on an Si wafer W includes a reaction gas discharge system 15 for evacuating the space around the wafer W, a reaction gas supply system 14 for supplying hydrogen and oxygen gases Gh and Go so as to be mixed on the wafer W, and a chamber 2 having a group of lamps 9G for heating the wafer W and a wafer-carrying member 3. The wafer W is placed into the chamber 2, the chamber 2 is reduced in pressure, the wafer W is mounted on the wafer-carrying member 3, a reaction gas X as a mixture of the hydrogen and oxygen gases Gh and Go is supplied into a space Sb are circulated within the chamber 2, and the lamp group 9G heats the wafer W.



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